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EXAMINER

VU, NGOC K

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/620,303	Applicant(s) NORMAN, GEORGE I.	
	Examiner NGOC K. VU	Art Unit 2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 May 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-84 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-84 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 2623

Response to Arguments

1. Applicant's arguments filed 5/30/2008 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-12, 25-33, and 35-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leatherbury et al. (US 20020136231 A1) in view of Arias et al. (US 6,118,976 A).

Regarding claim 1, Leatherbury teaches an apparatus for delivering services, the apparatus comprising: a broadcast data source (115-116 of figure 1; 215 of figure 2) configured to provide digital broadcast data; a user data source (209 of figure 2) configured to provide digital user requested data (e.g., VOD); a transmitter (via 205 – see figure 2), configured to transmit the digital broadcast data on a broadcast channel within a spectrum historically dedicated to analog broadcast signals (within RF cable television spectrum); and the transmitter further configured to transmit the digital user requested data on a user channel within the spectrum historically dedicated to analog broadcast signals (0041-0043, 0036, 0046, 0048-0050, 0054, 0057-0058).

Leatherbury does not explicitly teach transmitting the digital broadcast data over an over-the-air data delivery system comprising at least a portion of an existing over-the-air analog broadcast system, and transmitting the digital user requested data over the over-the-air delivery system. However, Arias teaches distributing the digitized television programming including

Art Unit: 2623

conventional television programming and requested programming such as NVOD/VOD via over-the-air transmission system 20 as shown in figures 1-2 (see figures 1-2 and abstract).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Leatherbury by distributing the digitized television programming including conventional television programming and requested programming via over-the-air transmission system as taught by Arias in order to provide relatively low cost medium to transmit video in an effective manner.

Regarding claim 2, the combined teaching of Leatherbury and Arias teaches wherein the spectrum historically dedicated to analog broadcast signals is a VHF spectrum (e.g., 5MHz-1GHz) and/or UHF spectrum (see Leatherbury: 0041, Arias: abstract).

Regarding claim 3, Leatherbury teaches that the broadcast data source is a broadcast network (0036; 0048).

Regarding claim 4, Leatherbury teaches that the system further comprising a digital content server (within 105) configured to store digital content (see 0048).

Regarding claim 5, Leatherbury teaches that server 209 provides digital content (see 0048) but does not explicitly teach providing the encrypted digital content. However, Arias teaches encryption of the content (see col. 10, lines 11-25). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the server of Leatherbury by encrypting content in order to increase security to access the content in an effective manner.

Regarding claim 6, Leatherbury teaches that system comprises digital content server (105) fulfills digital content requests from a plurality of users (109), and back-channel communications (e.g., upstream) (see 0034, 0038-0048).

Regarding claims 7 and 10, Leatherbury teaches that the system comprises a back-channel receiver (207- figure 2) configured to directionally receive upstream data (see 0047).

Art Unit: 2623

Regarding claim 9, Leatherbury teaches that the system back channel communications include digital content requests (e.g., VOD - see 0048).

Regarding claim 11, Leatherbury teaches that the broadcast data comprises a television program (see 0036, 0048).

Regarding claim 12, Leatherbury teaches that the user requests data comprises a movie (e.g., VOD program - see 0036, 0048).

Regarding claim 25, Leatherbury teaches a method for delivering digital services, the method comprising: securing a license to broadcast within a spectrum historically dedicated to an analog broadcast signal (within RF cable television spectrum, e.g., 5MHz-1GHz); transmitting broadcast data on at least one broadcast channel within the historically dedicated spectrum (via 205); and transmitting user data (via 205) on at least user channel within the historically dedicated spectrum (0041-0043, 0036, 0046, 0048-0050, 0054, 0057-0058 and figure 2).

Leatherbury does not explicitly teach transmitting digital broadcast data over an over-the-air data delivery system comprising at least a portion of an existing over-the-air analog broadcast system, and transmitting digital user data over the over-the-air delivery system. However, Arias teaches distributing the digitized television programming including conventional television programming and requested programming such as NVOD/VOD via over-the-air transmission system 20 as shown in figures 1-2 (see figures 1-2 and abstract). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Leatherbury by distributing the digitized television programming including conventional television programming and requested programming via over-the-air transmission system as taught by Arias in order to provide relatively low cost medium to transmit video in an effective manner.

Art Unit: 2623

Regarding claims 8 and 29, Leatherbury does not explicitly teach the user-back channel comprises digital subscriber line (DSL) interface. Official Notice is taken that using DSL interface in broadband environment is well known in the art. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Leatherbury by including a DSL interface in order to have advantages of greater upstream bandwidth and lower latency.

With respect to claims 26 and 28, 30 and 31, see rejections of claims 2, 7, 10, and 9, respectively.

Regarding claim 27, Leatherbury teaches that each 6 MHz forward band channel may contain multiple digital channels that are MPEG encoded (see 0042, 0045).

Regarding claim 33, Leatherbury does not explicitly teach that the server is further configured to provide an encryption key to enable reception of encrypted digital content. Official Notice is taken that controlling access to media content by decrypting encrypted content using a key is well known in the art. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the server of Leatherbury by decrypting encrypted content by using a key in order to prevent the unauthorized user to view the content.

Regarding claims 32 and 35, see rejection of claim 11.

Regarding claim 36, see rejection of claim 12.

Regarding claims 37-38, Leatherbury teaches including receiving a program/channel selection or a program series selection from a user/viewer at 109 (see 0034, 0038).

Regarding claims 39-41, Leatherbury teaches distributing the broadcast content to viewers (see figures 1-2), but not explicitly teach broadcasting data at a time published in a newspaper and or published time is published via a programming selection channel. Official Notice is taken that providing an EPG on a television having broadcast time via a channel

Art Unit: 2623

selection and/or providing an EPG published a newspaper having broadcast time are well known in the art. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Leatherbury by including an EPG on a television having broadcast time via a channel selection and/or an EPG having broadcast time published in a newspaper in order to allow viewers to easily view the schedule of future broadcast programs in advance.

Regarding claims 42-43, Leatherbury does not teach providing broadcast data comprising a digital edition of a newspaper. However, Arias teaches providing broadcast data comprising electronic newspaper (see col. 5, lines 15-19). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Leatherbury by broadcasting electronic newspaper as taught by Arias in order to enhance broadband service.

Regarding claim 44, Leatherbury teaches installing a digital services delivery component comprising a transmitter (205 - see figure 2).

4. Claims 13-24, 45-57, and 60-64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dolgonos et al. (US 20020147978 A1) in view of Arias et al. (US 6,118,976 A).

Regarding claim 13, Dolgonos teaches an apparatus for receiving digital services, the apparatus comprising: an antenna (16 – figures 1, 4) configured to receive a digitally encoded transmission signal within a spectrum historically dedicated to analog broadcast signals (e.g., UHF), the digitally encoded transmission signal comprising a plurality of channels including at least one broadcast channel (providing television programs) and at least one user-requested channel (e.g., providing email, Internet data...etc) (see 0005, 0019, 0022, 0023, 0026-0028,

Art Unit: 2623

0038; figure 1); and a receiver (34) configured to convert a selected channel within the digitally encoded transmission signal to a digital data stream (0026, 0036 and figures 1, 4).

Dolgonos does not explicitly teach transmitting the digitally encoded transmission signal over an over-the-air data delivery system comprising at least a portion of an existing over-the-air analog broadcast system. However, Arias teaches distributing the digitized television programming including conventional television programming and requested programming such as NVOD/VOD via over-the-air transmission system 20 as shown in figures 1-2 (see figures 1-2 and abstract). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Dolgonos by distributing the digitized television programming via over-the-air transmission system as taught by Arias in order to provide relatively low cost medium to transmit video in an effective manner.

Regarding claim 14, Dolgonos teaches that the system further comprises a back-channel transmitter (34 - figure 4) configured to conduct back-channel communications (upstream) (see 0026 and figures 1, 4). Dolgonos does not explicitly teach conducting back channel communications via the over-the air data delivery system. However, Arias teaches establishing a return path to the broadcaster wirelessly or over-the-the air transmission system (see col. 3, lines 40-44 and 58-62). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Dolgonos by conducting back channel communications via the over-the air data delivery system as taught by Arias in order to provide relatively low cost medium to transmit data.

Regarding claim 15, Dolgonos teaches that the back-channel transmitter is a wireless transmitter (see figures 1, 4, and 8, 0017, 0026).

Regarding claim 16, Dolgonos teaches digitally encoding a back-channel transmission signal within the spectrum historically dedicated to analog broadcast signals (see 0026, 0030).

Art Unit: 2623

Regarding claim 17, Dolgonos teaches that the antenna (16) is further configured to directionally transmit the back-channel transmission signal (see 0026, 0033).

Regarding claim 18, Dolgonos teaches that the antenna is configured to directionally receive the digitally encoded transmission signal (via 48 - figure 6; 0028).

Regarding claim 19, Dolgonos teaches that the digitally encoded transmission signal comprises television program (see 0038).

Regarding claim 20, Dolgonos teaches that the spectrum historically dedicated to analog broadcast signal is UHF (see 0036).

Regarding claim 21, Dolgonos as modified by Arias teaches that the system comprises a program selector configured to enable selection of digital content (e.g., in response to user's request to provide a NVOD/VOD program - see Arias: col. 10, lines 45-49).

Regarding claim 22, Dolgonos does not teach the system comprising a telephone interface configured to provide telephone services. Official Notice is taken providing telephone services from telephone interface is well known in the art. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Dolgonos by providing telephone services in order to enhance the services.

Regarding claim 23, Dolgonos does not teach a decryption module configured to decrypt encrypted digital content. Official Notice is taken that controlling access to media content by encrypting the content and decrypting the encrypted content is well known in the art. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the server of Dolgonos by decrypting encrypted content in order to prevent the unauthorized user to view the content.

Regarding claim 24, Dolgonos teaches that the receiver is configured to receive an email message (see 0018, 0033).

Art Unit: 2623

Regarding claim 45, see rejection of claim 13.

Regarding claim 46, see rejection of claims 14 and 16.

Regarding claims 47-49 and 52, see rejection of claims 17-19 and 20, respectively.

Regarding claims 53-55, Dolgonos teaches transmitting email message from user via upstream to Internet (see 0033).

Regarding claims 56-57, Dolgonos teaches that in order to perverse upstream bandwidth in the cable plant, the system could be configured so that only one of the antenna nodes actually sends the request signals over the cable plant to the hub (see 0033).

Regarding claim 60, see rejection of claim 24.

Regarding claims 61-62, Dolgonos teaches selecting a program, e.g., pay-per-view, or a program series, e.g., television programs/shows (see 0023).

Regarding claims 50-51 and 63-64, Dolgonos does not teach providing broadcast data comprising a digital edition of a newspaper. However, Arias teaches providing broadcast data comprising electronic newspaper (see col. 5, lines 15-19). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Leatherbury by broadcasting electronic newspaper as taught by Arias in order to enhance broadband service.

5. Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Leatherbury et al. (US 20020136231 A1) in view of Arias et al. (US 6,118,976 A) and further in view of Kim et al. (US 7,225,162 B2).

Leatherbury fails to teach purchasing an encryption key comprises visiting a web page. However, Kim teaches selling a key for decrypting via a web page as shown in figure 6 (see col. 5, lines 3-10 and 45-53; figure 6). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Leatherbury by selling a

Art Unit: 2623

key for decrypting an encrypted content via a web page as taught by Kim order to save time for a transaction between a viewer and provider.

6. Claims 58-59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dolgonos et al. (US 20020147978 A1) in view of Arias et al. (US 6,118,976 A) and further in view of Kim et al. (US 7,225,162 B2).

Regarding claims 58-59, Dolgonos fails to teach purchasing an encryption key to enable reception of encrypted digital content and wherein purchasing the encryption key comprises visiting a web page. However, Kim teaches purchasing a key for decrypting an encrypted content via a web page as shown in figure 6 (see col. 5, lines 3-10 and 45-53; figure 6). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Dolgonos by purchasing a key for decrypting an encrypted content via a web page as taught by Kim order to save time for a transaction between a viewer and provider.

7. Claims 65 and 66 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rakib et al. (US 20040172658 A1) in view of Arias et al. (US 6,118,976 A).

Regarding claim 65, Rakib teaches a method for providing digital services, the method comprising: securing a license to broadcast within a spectrum historically dedicated to an analog broadcast signal (see 0038, 0119); transmitting a first digital data stream (e.g., video signal) on a first channel in a first transmission direction (delivering to a television set 28); and concurrently transmitting a second digital data stream (telephone/Internet data) on the first channel in a second transmission direction (delivering to a PC) (transmitting the digital data encoding video signal, telephone and Internet data onto one or more downstream channel for simultaneously transmission on the HFC cable plant with regular TV programming see 0056 and figure 3).

Art Unit: 2623

Leatherbury does not explicitly teach transmitting the first digital data stream over an over-the-air data delivery system comprising at least a portion of an existing over-the-air analog broadcast system, and transmitting the second digital data stream over the over-the-air delivery system. However, Arias teaches distributing the digitized television programming including conventional television programming and requested programming such as NVOD/VOD via over-the-air transmission system 20 as shown in figures 1-2 (see figures 1-2 and abstract). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Leatherbury by distributing the digitized television programming including conventional television programming and requested programming via over-the-air transmission system as taught by Arias in order to provide relatively low cost medium to transmit video in an effective manner.

Regarding claim 66, Rakib's system providing telephone service (see 0037-0038) but Rakib does not explicitly teach providing wireless telephone service. Official Notice is taken that providing wireless telephone service such as cellular telephone service is well known in the art. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Rakib by including wireless telephone service in order to provide more convenience to users to make or receive a phone call.

8. Claims 67-81 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chan (US 20030196211 A1) in view of Arias et al. (US 6,118,976 A).

Regarding claim 67, Chan discloses a system for delivering digital services, the method comprising: a transmitter (provider/headend) to transmit broadcast data on a plurality of broadcast channels (e.g., 364 - figure 3) within a spectrum historically dedicated to analog broadcast signals and concurrently transmit user requested data on a plurality of user channels (e.g., 372 - figure 3) within the spectrum historically dedicated to analog broadcast signals; and

Art Unit: 2623

a receiver (STB) configured to convert a selected broadcast channel of the plurality of broadcast channels to a digital data stream (see figures 1, 3, 0031, 0032, 0042, 0046).

Regarding claim 68, Chan teaches that wherein the spectrum historically dedicated to analog broadcast signals is a VHF spectrum (e.g., 6MHz - 0031, 0032).

Regarding claim 69, Chan teaches that wherein the broadcast data is received from a broadcast network (see 0021, 0023).

Regarding claim 70, Chan teaches that the system further comprising a back-channel receiver (508) configured to conduct back-channel communications (see figure 5, 0033, 0043).

Regarding claim 71, Chan teaches that wherein the back-channel receiver is a telephone modem (see 0043).

Regarding claim 72, Chan teaches that wherein the back-channel communications include digital content requests (see 0033, 0043).

Regarding claim 73, Chan teaches that wherein the back-channel receiver is further configured to directionally receive data (see figure 5; 0033).

Regarding claim 74, Chan teaches that wherein the broadcast data comprises digital content such as a movie and/or a television program (see 0030, 0042).

Regarding claim 75, Chan teaches that wherein the user requested data comprises digital content such as a movie and/or a television program (see 0030, 0042).

Regarding claim 76, Chan teaches that the system further comprising a digital content server (within provider or headend) configured to fulfill digital content requests from a plurality of users (see 0043).

Art Unit: 2623

Regarding claim 77, Chan does not explicitly teach providing the encrypted digital content. However, Arias teaches encryption of the content (see col. 10, lines 11-25). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the server of Chan by encrypting content in order to increase security to access the content in an effective manner.

Regarding claim 78, Chan teaches the system further comprising a back-channel transmitter (508) configured to conduct back-channel communications (figure 5; 0033, 0043).

Regarding claim 79, Chan teaches that wherein the back-channel transmitter is a telephone modem (see 0043).

Regarding claim 80, Chan teaches that wherein the back-channel communications comprise digitally encoding a back-channel transmission signal within the spectrum historically dedicated to analog broadcast signals (see 0033).

Regarding claim 81, Chan teaches that wherein the receiver is further configured to receive digital content such as a movie and/or a television program (see 0030, 0042

9. Claims 82-84 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kostresti et al. (US 5,822,324 A) in view of Okawara et al. (US 20020059615 A1).

Kostresti teaches an apparatus for delivery telephone service to a geographic region (see figure 4), the apparatus comprising: a transmitter (within 41) configured to transmit telephony data wirelessly; and a back-channel receiver (within 41) configured to receive telephony data from subscribers wirelessly. See col. 9, lines 24-50; col. 1, lines 20-29. Kostresti does not teach transmitting data on a plurality of user channels within a spectrum historically dedicated to analog broadcast signals wherein the spectrum historically dedicated to analog broadcast signals is VHF/UHF spectrum. However, Okawara teaches providing radio waves in VHF/UHF band for cellular phones and PHS terminals, and a radio telephone repeater for

Art Unit: 2623

transmitting/receiving the radio waves (see abstract). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Kostresti by providing radio waves in VHF/UHF band for cellular phones and PHS terminals, and a radio telephone repeater for transmitting/receiving the radio waves as taught by Okawara in order to decrease interference in an effective manner.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NGOC K. VU whose telephone number is (571)272-7306. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John W. Miller can be reached on 571-272-7353. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2623

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/NGOC K. VU/
Primary Examiner, Art Unit 2623